

ABSTRACT

A universal decontamination formulation and method is disclosed based on the *in situ* generation dioxirane(s) under non-corrosive neutral conditions for the neutralization of chemical and biological warfare (CBW) agents. The composition relates to the generation of dioxiranes by mixing a monopersulfate-containing compound in the presence of a ketone in water buffered with a carbonate-type buffer, producing a pH neutral formulation that provides effective reactivity towards CBW agents over a wide range of temperatures.